THE MARINE RECORD

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THE STEAM YACHT HUNTRESS.

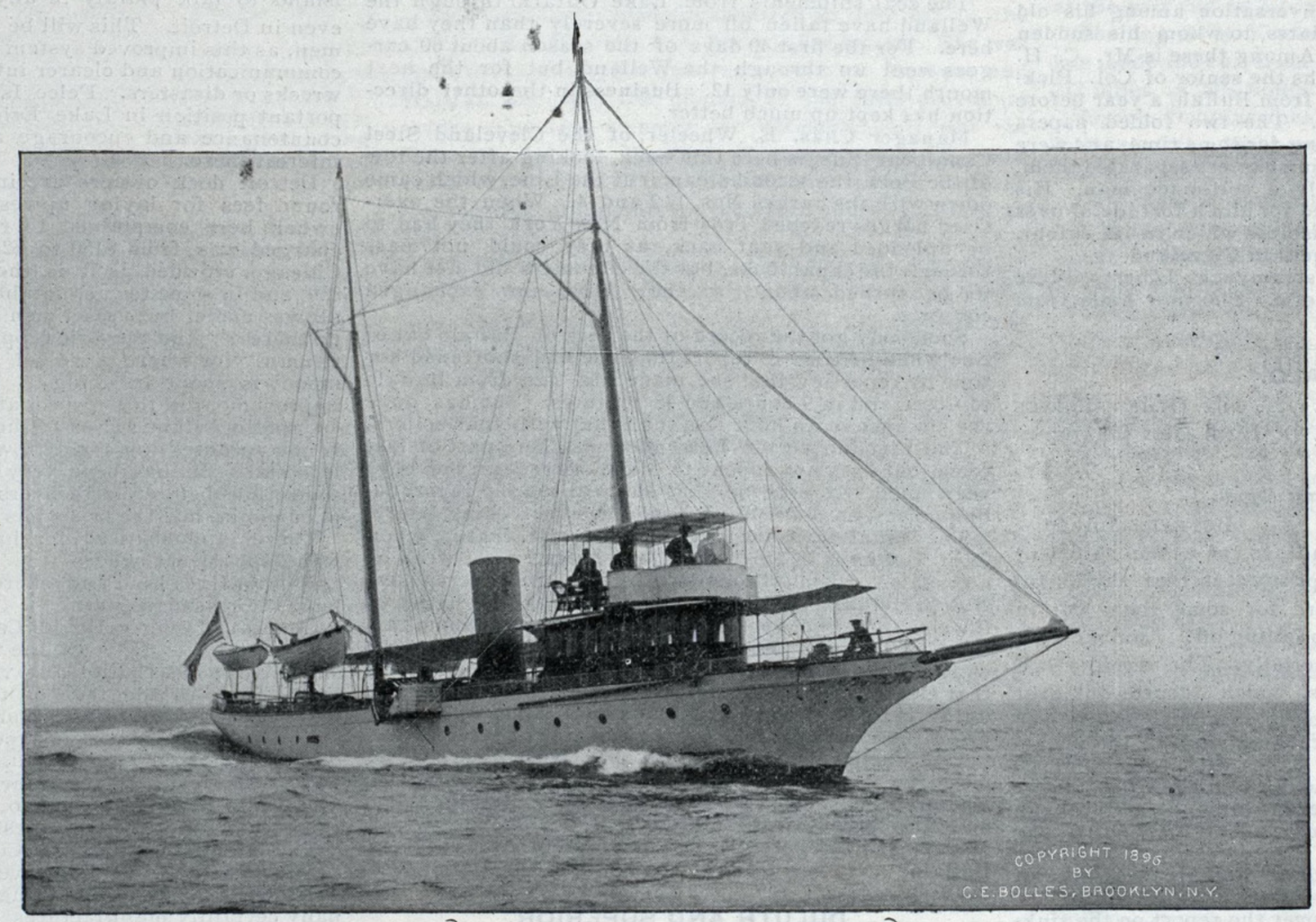
The handsome steam yacht Huntress, an illustration of which is here shown, was constructed last year at the yard of Charles L. Seabury & Co., Nyack, N. Y., having been built to the order of Mr. F. C. Fowler, of Moodus, Conn. She has proved a perfect seaboat, and is, without doubt, one of the best yachts of her size afloat. She had been guaranteed a speed of 16 miles per hour, but has really done much better than that. The Huntress is 120 feet long over all and 97 feet on the water line, with 16-feet beam, 9 feet molded depth, and a draft of 6½ feet. The keel, stem and deadwoods are white oak, and the frames, deck beams, bilge, and walestrakes are of steel. The planking is of yellow pine. All through bolts are of Tobin bronze. There are four water-tight bulkheads of steel. The coal bunkers are of steel, and extend each side of boiler and engine space. The rudder is of bronze. The heel of the rudder is stepped in a bronze scag fitted on the bottom of the keel. The deck is white pine, fastened by lag screws from the under side of the deck-timbers.

The machinery consists of a triple.expansion engine of the latest design, and a Seabury water-tube boiler, with condenser, pumps, and all approved fittings.

The deckhouse forward is of mahogany, the lower part paneled and the upper part fitted with plate glass windows. The interior, sides and ceiling, is finished in panel work. On the bulkhead is arranged a buffet, with a mirror in the center; the mirror is hinged on its lower edge, and is backed with green felt, so that when swung down it forms a writing desk. The top of this house is covered with grating, and connects directly to the bridge.

Directly aft of the chain-lockers in the forehold is a toilet-room, finished in butternut and mahogany. Aft of this, are two guest rooms, similarly finished. In one room is a single berth and in the other a double berth, with drawers beneath and dressing cases. Opposite these rooms are arranged clothes lockers and sleeping places for servants. Directly aft of the guest rooms is the main saloon, finished in mahogany and paneled on sides and ceiling with large plate glass mirrors in the forward bulkhead, and a stationary center-table of mahogany. The entrance to this saloon is through a wide companionway leading directly from the deck. Aft of the main saloon is the owners's stateroom, which, with its private toilet room, extends the full width of the yacht. This room is finished in mahogany, and is luxuriously furnished.

Immediately aft of the engine is the galley, fitted with ice-box, dresser, dish racks, locker for coal, sink, pump, and range. The galley is finished in ash. Then come the crews' quarters, aft of which is the captain's room, with a large berth and a locker especially designed for nautical instruments, with other conveniences. Steam heaters, with marble tops, are fitted in the main saloon, owner's room, and the deck saloon.



STEAM YACHT HUNTRESS.
Built by Chas. L. Seabury & Co. for F. C. Fowler, of Moodus, Conn.

NEW ORDER TO INSPECTORS.

The Treasury Department, through Supervising Inspector-General Dumont of the Steamboat Inspection Service, has issued the following order to supervising and local inspectors of steam vessels, life boat and life raft manufacturers, and others:

The department having been informed that certain life rafts, not built according to the specifications presented to the Board of Supervising Inspectors, at the time of the approval of such rafts, have been placed on steam vessels, all inspectors of steam vessels are hereby directed not to accept or pass hereafter any life raft or life boat, unless there shall be furnished with each a written guarantee, over the signature of the builder, that such raft or boat is constructed in strict accordance with the specifications presented to the Board of Supervising Inspectors at the time of its aproval.

It is further ordered that on and after August 1, 1896, no life raft or life boat shall be accepted or passed by the inspectors of steam vessels unless it shall have permanently attached thereto a metallic plate having thereon, in raised letters and figures, the name of the maker of the raft or boat, the place where manufactured, the shop number and date of manufacture; and if built of metal, the thickness, Birmingham gauge.

Capt. Michael Anderson has sold the schooner Annie Dall to Thomas Christensen & Sons for $1,200. The sale took place at Milwaukee.

GERMAN SHIPBUILDING.

A new steamer is now building at Stettin for the North German Lloyd line, to compete with the flyers of the Cunard and the American lines. She is to be 625 feet long between perpendiculars, or more than 650 feet over all, 66 feet wide and 43 feet deep inside, with engines close to 30,000 horse-power. Another ship of the same dimensions is being built at the Schichau yard at Dantzic. The Hamburg-American line will soon have the largest freight steamer in the world; this, however, is being built at Belfast. It is a twin-screw ship 560 feet long, 62 feet wide and 41 feet deep, with a cargo capacity of 12,000 tons, or, say, that of 400 freight cars.

Although Germany's fleet of merchant sailing ships is smaller than that of Great Britain she has the largest ship of the kind afloat and several of the swiftest. The Potosi is a five-masted ship 360 feet long inside, 50 feet wide and 31 feet deep, with a cargo capacity of 6,200 tons. She spreads 50,020 square feet of canvas. One German ship made a voyage of 13,485 nautical miles at an average speed of 8.14 knots per hour. Another ship made 6,425 miles at 9.25 knots.

In shipbuilding, the Germans have some disadvantages. Nearly all kinds of materials are higher at her shipyards than at the British yards. Labor is somewhat lower; but the distance of the mines, especially of coal mines, more than makes up the difference. The builders are also burdened by laws compelling contributions to old age pension funds and accident insurance associations.

EL HEIRIE.

The half-rater El Heirie (The Swift Camel) which has been racing with a Canadian yacht of the same class, is the property of Mr. Clinton H. Crane, of New York, who is only 23 years old. Mr. Crane designed her himself, and had her built at Lawley's yard, South Boston. She is 23 feet 3 inches over all, 14 feet 4 inches on the water-line, 5½ feet beam on deck, and 5 feet at water-line. She has a dagger-board of quarter-inch Tobin bronze. When this board is raised as far as it will go it still projects about 5 inches below the boat's bottom, forming a keel nearly 4 feet long and 5 inches deep. This is caused by the pivot pin being placed 6 inches above the lower edge of the board. This also makes the board very nearly self-balancing, and the scheme appears to be worthy of adoption by lake yachts of this class. With the board down the boat draws five feet. She is of a double-skin construction, mahogany on the outside, with white pine inner planking and deck. Her sail spread is about 240 square feet, and she carries a gaff mainsail.

NEWS AROUND THE LAKES.

CLEVELAND.

THE LAKE SHORE BRIDGE DEAL HAS BEEN ARRANGED AND THE RIVER WILL BE WIDENED.

CLEVELAND, July 22.

The River and Harbor Commission has completed its arrangement with the Lake Shore Railroad Co., on the lines urged in last week's RECORD, and now there is no longer any bar to the work of widening the river as proposed in the projects already submitted to the War Department by Col. Jared A. Smith. In consideration of an agreement by the city to substitute merely the word steel for draw before the term bridge in the Lake Shore's contract to open a channel to the lake from the head of the old river bed, should it ever be required, the railroad company will give the city a warranty deed for all the land on Whisky Island neccessary to double the width of the river. The pivot pier of the Lake Shore bridge will then be in the middle in place of at one side of the river, and as good a channel will be afforded on the west side as now exists on the east side of the bridge.

Secretary Gustav Cold, of the Ship Owners' Dry-dock Co. has just received an interesting letter from President Robert Wallace, of the Cleveland Ship Building Co., who has been spending several weeks on the Island of Nantucket. Mr. Wallace writes that this is the most old-fashioned place he ever saw. He says that fifty years ago over 100 coasting vessels and whalers hailed from the island, which now boasts only one—a little scow schooner of about 350 tons capacity. Mr. Wallace will return in a week or so.

Mr. John Joll, foreman of the Cleveland dry-dock, is a man thoroughly up in his work, and is moving things along in good style. Mr. Joll is said to be contemplating matrimony once again; a former lady-love of his at his old home is coming out to join him next month.

The sudden death of Col. James Pickands continues to be a frequent topic of conversation among his old friends and business associates, to whom his sudden taking off was a sad shock. Among these is Mr. C. H. Tucker, who was a few months the senior of Col. Pickands, and came to Cleveland from Buffalo a year before the colonel came from Akron. The two folded papers together in the Leader building for some time, and were fast friends until their diverging careers separated them. Col. Pickands was thoroughly a self-made man. His great business ability amassed for him a fortune of over $400,000, and established a business which in its extent, and scope has probably no equal in Cleveland.

The name of the auxiliary steamyacht Liberty Ware has been changed to Maryette. She now hails from Fairport.

BUFFALO.

SHIPMENTS OF COAL FALLING OFF, BUT OTHER THINGS REMAINING PRETTY WELL IN LINE—BIG TRADE IN PULPWOOD.

Special Correspondence to The Marine Record.

BUFFALO, July 21.

This port is not very far in it, so far as the shipment of coal is concerned, for the prospect is that there will be very little moved from here for some time; but in other commodities there is no falling off. Lumber has, in fact, increased very materially. The receipts last week were nineteen cargoes, which turned out over 11,000,000 feet, not to mention the shingles, mostly red cedar, that come in as part cargoes on the line boats from Duluth and Gladstone. This, with over 5,000,000 bushels of grain and flour enough to make close to another million, besides the average amount of package freight both ways ought to keep us at least on a par with other ports.

Major Symonds, U. S. Engineer here, is enjoying an outing at the Sault.

There is some indignation over the report on the sinking of the barge Little Wissahickon, made in a Detroit paper. The article is not before me, though I saw it at the time, and I am not able to quote from it very direct, but it contained the usual amount of remarks about the "coffins" that men risk their lives in on the lakes and added, that so far as learned, the barge had long disappeared from the rating books and had not been rebuilt in modern times. So far as the seaworthiness of a boat is concerned it is best to allow the inspectors a monopoly of that sort of comment. The newspapers do not dare to say these things while a vessel is still afloat and it is good taste to avoid it when there is no longer a possible libel suit in it. As to the vessel in question she had been rebuilt within the past two years at a cost of about $2,500 and was always kept in the best of repair, rating B 1 in Lloyds. Capt. McKay was such an exceptionally good navigator that such a vessel in his hands was an especially good risk for her class. It is supposed that she struck something and the gale did the rest, as it might have done for a much more pretentious vessel. Foolish remarks on her condition are, therefore, worse than idle, as they strike at the living as well as the dead, without reason.

The giving away of a cargo of 60,000 bushels of wet oats, part of the Samoa's wet load, now discharging at Kingston, is a sad commentary on the drop in values. At first thought one would say that this grain must have been worth more than the unloading and duty, but our wet grain men say that they would hardly take wet oats at that. One of the local wet grain dealers has had some experience with a canal cargo he bought lately, and he would not touch the Samoa's cargo at any price.

There is a good prospect of a diversion in the elevator business. The Black Rock elevator, which is outside of the pool, is doing more and more work every week, running mostly on oats for canal shipment, and now the Raymond elevator, popularly called the grasshopper, on account of some peculiarity of structure, is getting the little schooners that begin to come down from Toledo with wheat. The schooners Dobbie, St. Peter and Penokee were all in Monday for that house, badly overdoing the business at the start.

John L. Crosthwaite appears to have picked up about all the vessels he could find and sent them to Bay Mills, in the Sault, for pulp-wood. When the Sault Paper Company moved to Niagara Falls and changed its name to the Niagara Paper Company it naturally had to leave all its forests of spruce behind, and as soon as the new factory was in operation there was a large industry at once set up in the pulp-wood carrying trade. There have been about forty cargoes brought down already this season and there ore 18 vessels now either coming down with the wood or loading it for shipment. The wood is held in a great boom at the mill, and all the vessels have to do is to run into the boom and throw their cargoes overboard. The mill will grind 35,000 cords this year and is to be enlarged so as to grind 60,000 cords next year.

Capt. George McLeod is preparing to visit his old home on Prince Edward Island this week, going to some points on the New England coast and thence by rail. He made the trip seven years ago.

Samuel F. Colt, who charters the vessels for the Lehigh Valley Co. and looks after their loading, goes up to Duluth on the Cranage, this week, and will look after the company's handling facilities there.

The coal shipments from Lake Ontario through the Welland have fallen off more severely than they have here. For the first 40 days of the season about 60 cargoes went up through the Welland, but for the next month there were only 12. Business in the other direction has kept up much better.

Manager Chas. E. Wheeler, of the Cleveland Steel Canalboat Line, is here this week, looking after the tow of the Beta, the second steamer of the Line, which came down with the barges Nos. 1, 2 and 4. When the oversized barges reached Troy from New York they had to be unloaded and sent back, as they could not pass through the canal locks, but the steamers did not have to be turned about, so they have now exchanged consorts.

Somebody got the record of the City of Buffalo out of line when he tried to report that she had shortened her time by reporting that she made the run from Buffalo to Cleveland in 9 hours and 45 minutes. She has done the distance in an hour less than that with four boilers.

The revenue cutter Fessenden was here part of last week, but does not appear to have stirred up the boys very much. It may be that she will merely report delinquences, as the Andy Johnson has been doing lately.

The canal men are windy if not wise, that is, when Capt. DePuy is in port with his boats. Last week he marshaled them alltogether in his fine, persuasive style, retold the story of their wrongs at the hands of the elevators and worked off the usual resolutions, this time asking the Merchant's Exchange to interfere, which of course that body will never do. It is no secret that elevator rates stay up, while other things go down, but it is to be feared that the canal men will never prove their case till they get an elevator of their own.

The Curtiss Navigating Co. has been incorporated with the Secretary of State; capital stock, $145,000. The principal office of the company is in Buffalo. The directors are: Edward Smith, J. J. H. Brown, W. M. Morey, J. B. Rogers, E. P. Close and M. W. Childs, of Buffalo.

JOHN CHAMBERLIN.

DULUTH AND SUPERIOR.

NORTH WESTERN RAILROADS ONCE AGAIN CUT THE COAL FREIGHT FROM THE HEAD OF LAKE SUPERIOR.

Special Correspondence to The Marine Record.

DULUTH, JULY 21.

A large amount of steel rails are to be shipped to Duluth from Illinois Steel Co. The steel will be loaded by boats handled by Captain Wolvin, and will be delivered at Culver's dock. Special preparations have been made to receive it. It has not been stated for whom the steel is intended.

Beginning Tuesday of last week the roads between Duluth and St. Paul and Minneapolis inaugurated a cut of 25 cents in the rate of soft coal between those points. The rate has been $1 a ton, but under the new order is 75 cents. The coal companies at the head of the lakes have been working for this for several weeks, ever since the roads east of Chicago cut the rates from the West Virginia and Ohio mines to Chicago, enabling the coal to be landed in the Twin Cities cheaper by the all-rail route; cheaper than by the lakes and rail routes via Duluth. The continuance of this would have seriously injured the coal business here, but the cut made this week puts them exactly on the same basis as before. If the eastern roads should again cut the rate the situation would be serious, but it is not anticipated here that this will be done.

The coal companies at the head of the lakes are threatened with a strike of the handlers. The 'longshoremen who handle freight on the docks in Superior are out, and the coal handlers are affiliated with them and may possibly go out to express their sympathy, and in the belief that a general tie-up would bring a speedy settlement. If this should be done it would take very little to send the Duluth handlers out also. The situation at Superior has become more serious within the past few days.

The record for heavy shipments of ore was broken at the Mesaba docks, Duluth, Tuesday of last week, when 13 cargoes went out aggregating 28,377 tons. The best previous day's shipment was about 26,000 tons.

The steamer Kearsarge was loaded with 111,000 bushels of wheat at Elevator D on Tuesday, the 14th. The time of loading including weighing, consumed just two hours.

Mr. S. T. Wellman, of Cleveland, the well known expert who was so long connected with the Ohio Steel Works, of that city, is working on plans for a large new open hearth furnace in connection with the present blast furnace, blooming mill, rolling mill and wire mills. The capital is said to be ready and there seems every prospect that something will be done.

DETROIT.

IMPROVED FACILITIES FOR COMMUNICATING WITH PELEE ISLAND—HIGH WINTER DOCK CHARGES CONDEMNED.

Special Correspondence to The Marine Record.

DETROIT, July 22.

The Canadian government announees that it proposes to connect the cable to Pelee Island with the Bell telephone system on the mainland, and also improve the instruments in use. This will allow a person on the island to talk plainly to anyone on the mainland, or even in Detroit. This will be of great service to vessel men, as this improved system will permit of more rapid communication and clearer intelligence in case of any wrecks or disasters. Pelee Island occupies a very important position in Lake Erie, and Americans should countenance and encourage any efforts made in their interest there.

Detroit dock owners are in the habit of charging round fees for laying up vessels in winter. A vessel owner here complained to the RECORD that the fee charged was from $150 to $250 for a winter, while in Chicago, crowded as it is, the charge was only $25 to $50, and in some towns, notably Erie, Pa., no charge at all was made, but vessel men were almost invited to lay up there. "And the Erie people are wise," said the gentleman, "for where a vessel lays up she fits out and money is spent in doing it. There is great room for improvement in this respect at Detroit."

Captain Arthur J. Fox of the steamer Frank E. Kirby, is now progressing slowly towards recovery at Harper Hospital. He has been very low and it will still be some time betore he recovers. His illness is typhoid pneumonia, but the crisis has now passed.

There is much need for improvement of the foot of Randolph street where the Lackawanna, Thompson and other lines land and where the Killarney Fish Co. have their headquarters.

General Manager David Carter has figured up the business of the D. & C. line thus far this season and says it exeeeds that of any year in the history of the line. This, in the face of the dull times and close money, is a record to be proud of.

The steamer Senator is expected to start next Saturday on her first long trip up the lakes. Her boilers have been tested, her engines worked to satisfaction and it now remains for her to establish a record among the great carriers of the lakes.

The Michigan Lubricator Co. say they are not catering for marine trade, and give as a reason that it is so hard to introduce a good thing on a vessel. This company certainly manufactures some of the finest goods of their class in the country, and their extensive acquaintance among all kinds of machine manufacturers leads one to give considerable attention to what they say; and it is unfortunate that the best firms in the country are not all bidding for marine patronage. Surely this would not be so if impartial judment were passed on what was presented for trial.

Vessel men in this city are almost without exception sound money men. "What we have is good enough for us," they say, and express fears that the radical cries of the free silver party will not conduce to improving the old and beaten channels of business.

The busiest man in Detroit is Edward Horn, owner of the tug Arthur Jones. Mr. Horn is a believer in keeping a boat well up, and makes it a point to get a man who is industrious, and his policy has resulted in more work than he could well attend to all the season. On Monday his boat went to the dock to blow out her boiler for the first time in five weeks.

S. F. Hodge & Co. have finished with their part of the Merida's engines, and it is expected that she will be able to get away by the latter part of this week.

The way admiralty business has decreased in Detroit during the past three years is something remarkable.

One law firm four years ago had some eighty cases, large and small, on the court docket; now it is doubtful if any firm in town has more than a dozen of recent date. John C. Shaw, who has made a specialty of that line, has the bulk of the business, and his reputation as an expert practical man and good pleader has placed him in the lead. The blanket policies now issued by insurance companies are in a great measure responsible for this, but decisions unsatisfactory to all concerned are the principal cause.

On her last trip down the City of Alpena had a queer experience at Alpena. Twenty Indians had been up there stripping tanbark, and when the steamer reached the port they were so drunk that the crew brought them aboard on trucks and laid them upon the main deck in a row. The next day they were landed at Port Huron. Eighteen of the men were simply helpless with liquor.

The thick fog at the mouth of the river Monday night caused the Hudson and Rhodes to get aground. The Rhodes was only on a little while, and releasing herself proceeded. The Hudson sent for the wrecker Saginaw and was released about 10 o'clock. The damage was not of any extent. H. McC.

CHICAGO.

ONE CHICAGO TOWING COMPANY DECIDES TO BUY ITS FUEL AT FIRST HAND—DEATH OF CAPT. JOHN HEA.

Special Correspondence to The Marine Record.

OFFICE OF THE MARINE RECORD,
CHICAGO, July 21.

The Dunham Towing & Wrecking Co. have gone in for supplying their tugs with coal at first cost. The steamer C. E. Sheldon is at their dock, foot of North Market street, unloading a cargo of 1,000 tons of soft coal for the use of the company's tugs.

A strike for better pay by the unloaders of iron ore at the Illinois Steel Works in the north branch of Chicago River, caused the steamer Marquette and schooner Thomas L. Parker to be sent to South Chicago, and the steamer Josephine to Milwaukee to unload. The strikers, who are not union men, and had been getting 13½c an hour as car pushers, demanded 15c per hour, and the shovelers and dumpers who had received 22c per hour, demanded 30c per hour. The strikers have all been discharged by the company who will look for other men to fill their places. If the men had been employed regularly they could have made a good living, but as they had to wait sometimes days for the arrival of a vessel to unload they asked for better pay to reimburse them for waiting.

Capt. John Hea, fifty-seven years of age, died at his home, No. 186 Dearborn avenue, Chicago, July 15. He was for about fourteen years prior to his decease connected with the Chicago Towing Co., and was well and widely known as a man of intelligence, well versed in marine matters; and any information obtained from him was always thoroughly reliable. Prior to his joining the Chicago Towing Co. he sailed the lakes many years, and was interested in and sailed the schooners Morning Light, Southwest and Parana; and he was also owner of the tug Eustaphieve. The deceased was a man of the strictest integrity and was well-known and respected. He was buried at Rose Hill on the 16th, and his funeral was well attended by many old marine friends. He leaves a widow, but no family.

The schooner Lake Forest, Capt. A. Waskow, arrived here Tuesday morning with cedar posts from Little Bay DeNoque. She was flying a 30-foot McKinley and Hobart flag on her foretop, which had been supplied by her owners, Messrs. Hitchcock & Hinds, when she was at Port Huron on her last trip down. Bad luck attended her way up, as she went ashore. Whether her political flag had anything to do with it is a conjecture which only the future will reveal.

Grain freights are steady on a basis of 1c on corn to Buffalo, but there is very little prospect of better freights.

The tug L. B. Johnson was sunk Friday morning at 2 o'clock about 600 feet NNE. of the light house on the east end of the government breakwater by collision with the steamer Mary Mills, laden with lumber coming into Chicago. The tug was in command of Captain John Sweeney and had a crew of six men. They got onto the tug's life raft and were picked up by a boat which was lowered from the Mary Mills. The Johnson was raised Tuesday afternoon by Fitzsimmons & Connell's dredge and pile driver and towed into the inner harbor by the tug Mosher.

THOMAS WILLIAMS.

RELIEF FOR COL. LYDECKER.

The Secretary of War has ordered that Capt. Curtis McD. Townsend be relieved from further duty with the Mississippi River Commission, and that he shall proceed to Grand Rapids, Mich., take station there and relieve Lieut. Col. Garrett J. Lydecker of the charge of certain river and harbor works on the east shore of Lake Michigan, to be designated by the chief of engineers.

The receipts of ore at Huron for the season up to July 1, dock figures, were 91,500 tons. During the same priod 136,931 tons of coal was shipped.

THE LATE CAPT. HUGH CHISHOLM.

THE RECORD has received a copy of a recent addition of the Meaford, Ont., Mirror, containing an excellent sketch of Capt. Hugh Chisholm, the pioneer Canadian shipbuilder who died on Monday, the 6th inst. at that place. Capt. Chisholm was born near Brampton, Ont., in 1824. In his early young manhood he came to Cleveland and served his apprenticeship with Rodney Caulkins, then a leading shipbuilder of this port. Leaving Cleveland he located at Port Credit, on the north shore of Lake Ontario, and built the first vessel ever constructed on the Canadian side of that lake, which he named the Credit Chief. Later he built at Port Credit the schooners British Queen and Jenny Lind. In 1848 he built at Toronto the schooner Maid of the West, which had a capacity of 15,000 bushels, a large cargo in those days. In 1850 he built the steamer Woodman at Port Perry. She was the first steamer on the lake Scugog and the adjacent lakes. Capt. Chisholm was master of the Woodman for three years.

In 1854 Capt. Chisholm built at Belle Ewart the steamer J. C. Morrison for the Northern Railroad Co. She was built for the passenger trade, and was a palatial boat for those days, costing about $60,000 and having a speed of about fifteen miles per hour. In 1856 he built the schooner Ontario at Whitby, and sailed her for five years between Chicago and Kingston. In 1861 Capt. Chisholm built at Belle Ewart the steamer Emily May, to the order of the late Capt. May, for trading on Lake Simcoe. The following year he built a steam dredge on Lake Simcoe for the Canadian government. He then went to Collingwood, where he superintended the construction of the old Northern Railroad elevator there, and also a hotel known as the Riley House.

Later on Capt. Chisholm acquired an interest in the steamer Her Majesty, and became her master. She was operated regularly for two years between Toronto and Halifax, and was the pioneer in the inter-provincial trade. The last steamer the deceased built was the Favorite, for the Meaford Transportation Co., now called the City of Parry Sound, and plying between Collingwood and points on the north shore of Georgian Bay.

Mrs. Chisholm died about a month before her husband, who leaves two sons and one daughter. Capt. Chisholm was everywhere highly esteemed, and his funeral was attended by some of the most prominent people of that part of the Dominion.

WRECKS AND WRECKING.

Rather more than the usual amount of stranding has occurred during the week, but vessels remained on but a short time and the damage was in most cases slight. The only total loss reported was that of the barge H. S. Walbridge, which went ashore Wednesday night, July 15, on the east end of Long Point. The crew got off safely. The Walbridge was owned by John Burns, of St. Clair, Mich., and was built by Edwards, of Milan, O., in 1862. She was valued at $1,000 and rated B1½ in Inland Lloyds. She was light and carried no insurance.

The schooner J. B. Wilber, with 24,000 bushels of corn from Chicago for Midland, Ont., got ashore July 15 five miles from her port of destination and is reported full of water.

The tug L. B. Johnson was sunk in the outer harbor, Chicago, by collision with the schooner Mary Mills. Particulars will be found in our Chicago letter.

The four Marinette men mentioned last week as supposed to have been lost turned up all right.

The steamer H. A. Root, Capt. Phelps, at Alpena with the outfit of the American Wrecking and Salvage Co. of Milwaukee, is in Thunder Bay in search of the Pewabic, Superintendent W. G. Smith being in charge. The expedition includes three divers, one of whom, Dusithe Gaulthier, of Montreal, went down to the Pewabic in 1865, when the steamer's yawl was rccovered. The wreck will probably be located by means of bearings taken at that time.

Capt. James Reid is making steady progress with the Cayuga. He has sunk all his steel pontoons and will have more built, as they have so far proven successful. The contract will doubtless go to the MacKinnon Manufacturing Co., of Bay City, which built the first four. Capt. Reid does not expect to get the Cayuga raised before autumn. He justly regards it as the greatest piece of wrecking work attempted on fresh water.

The schooner Reindeer, which has been on the bottom at the head of navigation, Ashtabula Harbor, will probably be raised soon.

The Mark Hopkins is probably at South Chicago by this time, having gone thither from her late resting place in the Sault in tow of the tug Brockway. As there has been no opportunity to hold a survey on her, the ownership is still in doubt. Wrecker McMorran is to have either $11,500 or the wreck, at the option of the underwriters. The insurance companies interested in the hull and the amounts of their respective risks are as follows: Union Marine, of Liverpool, $4,000; Ætna, $3,000; London Assurance, $3,000; Mannheim, $2,000, Marine, of London, $3,500; North American, $3,500; Detroit Fire and Marine, $2,500; Smith, Davis & Co., of Buffalo, $5,000; Worthington & Sill, of Buffalo, $5,000; Commercial Union, $6,500; total, $38,000. The cargo was insured in the Union Marine for $2,400.

The Samoa and Celtic have been floated and taken to Kingston. The steamer's cargo was ruined by water, and did not bring more than enough to pay the customs and handling charges. Only 800 bushels of the Celtic's corn was wet.

FLOTSAM AND JETSAM.

The barge Sonora, libeled for crew's wages; is to be sold some time next week.

Capt. John R. Gorman, a veteran in Milwaukee tug service died there Tuesday morning.

Mate Tomlin, of the steamer Unique, has qualified as master of her, vice Capt. John Robertson, resigned.

We are indebted to Capt. W. H. Stalker, light keeper at the east end of Long Point, for courtesies extended.

The tug S. M. Fischer, with three car ferries in tow, has made the run from Chicago to Sturgeon Bay canal, 217 miles, in 29½ hours.

Joseph Douglass has been appointed second assistant keeper of the light and fog signal station at Grand Haven, vice Louis W. Bau, resigned.

Capt. Joseph Bourassa, Joseph Columbo, and Hugh Mackenzie were each fined $75 and costs in the Federal Court at Marquette for towing over-sized rafts through Portage Lake canal.

The government contract at Lorain has begun. The deep channel there has been little more than the width of a large ship at the mouth of the Black River this spring, and the first work is to widen this channel. John Stang's dredge Continental is doing the work.

The International 'Longshoremen's Union has completed the work of its convention and adjourned. Chas. Kelly, of Washburn, was elected president; F. J. Weber, of Milwaukee, James Martin, of Buffalo, and Frank Foster, of Escanaba, vice-presidents; H. C. Barter, of Detroit, secretary-treasurer. The next meeting will be held at Buffalo.

VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD by George F. Stone, Secretary Chicago Board of Trade, July 18, 1896:

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Albany	.....	20,000	75,000	.....	.....
Baltimore	741,000	439,000	334,000	17,000	.....
Boston	767,000	169,000	133,000	53,000	.....
Buffalo	1,046,000	592,000	414,000	131,000	218,000
" afloat	.....	.....	.....	.....	.....
Chicago	13,591,000	4,958,000	978,000	275,000	21,000
" afloat	.....	.....	.....	.....	.....
Cincinnati	7,000	2,000	15,000	2,000	.....
Detroit	113,000	5,000	4,000	10,000	.....
" afloat	.....	.....	.....	.....	.....
Duluth and Superior	7,208,000	3,000	171,000	306,000	138,000
" " afloat	.....	.....	.....	.....	.....
Indianapolis	259,000	138,000	3,000	.....	.....
Kansas City	901,000	28,000	73,000	52,000	.....
Milwaukee	399,000	2,000	17,000	362,000	26,000
" afloat	.....	.....	.....	.....	.....
Minneapolis	15,788,000	23,000	358,000	71,000	10,000
Montreal	361,000	23,000	304,000	.....	35,000
New York	1,966,000	366,000	1,717,000	9,000	48,000
" afloat	32,000	.....	126,000	.....	.....
Oswego	46,000	5,000	.....	.....	49,000
Peoria	76,000	12,000	159,000	2,000	.....
Philadelphia	374,000	233,000	136,000	.....	.....
St. Louis	644,000	83,000	48,000	2,000	.....
" afloat	.....	37,000	.....	.....	.....
Toledo	425,000	30,000	4,000	87,000	.....
" afloat	.....	.....	.....	.....	.....
Toronto	164,000	1,000	71,000	.....	21,000
On Canal	536,000	183,000	1,272,000	115,000	91,000
On Lakes	1,299,000	1,053,000	681,000	162,000	91,000
On Mississippi	.....	261,000	14,000	.....	.....
Grand Total	46,743,000	8,666,000	7,107,000	1,656,000	748,000
Corresponding date 1895	40,483,000	5,941,000	5,137,000	148,000	58,000

IN THE ENGINE ROOM.

THE ENGINEERS' BILL.

In response to requests from a number of marine engineers who have not had other opportunities to see for themselves the provisions of the "bill to amend Section 4131 of the Revised Statutes of the United States, to improve the merchant marine engineer service and thereby also to increase the efficiency of the naval reserve," we reprint the text of the law, which is as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that Section 4131 of the Revised Statutes be amended so as to read as follows:

SEC. 4131. Vessels registered pursuant to law and no others, except such as shall be duly qualified according to law for carrying on the coasting or fishing trade, shall be deemed vessels of the United States, and entitled to the benefits and privileges appertaining to such vessels; but no such vessel shall continue to enjoy such benefits and privileges longer than it shall continue to be wholly owned by a citizen or citizens of the United States. or a corporation created under the laws of any of the States thereof, and be commanded by a citizen of the United States. And all the officers of vessels of the United States who shall have charge of a watch, including pilots, shall in all cases be citizens of the United States. The word "officers" shall include the chief engineer and each assistant engineer in charge of a watch on vessels propelled wholly or in part by steam; and after January 1, 1897, no person shall be qualified to hold a license as a commander or watch officer of a merchant vessel of the United States, who is not a native-born citizen, or whose naturalization as a citizen shall not have been fully completed.

Sec. 2. All licenses issued to such officers shall be for a term of five years, but the holder of a license may have the same renewed for another period of five years at any time before its expiration; provided, however, that any officer holding a license, and who is engaged in a service which necessitates his continuous absence from the United States, may make application in writing for one renewal, and transmit the same to the board of local inspectors with a statement of the applicant, verified before a consul, or other officer of the United States qualified to administer an oath, setting forth the reasons for not appearing in person; and upon receiving the same the board of local inspectors that originally issued such license shall renew the same for one additional term of such license, and shall notifiy the applicant of such renewal. And in all cases where the issue is the suspension or revocation of such licenses, whether before the local boards of inspectors, as provided in Sec. 4450, of the Revised Statutes, or before the supervising inspector, as provided in Sec. 4452 of the Revised Statutes, the accused shall be allowed to appear by counsel and to testify in his own behalf.

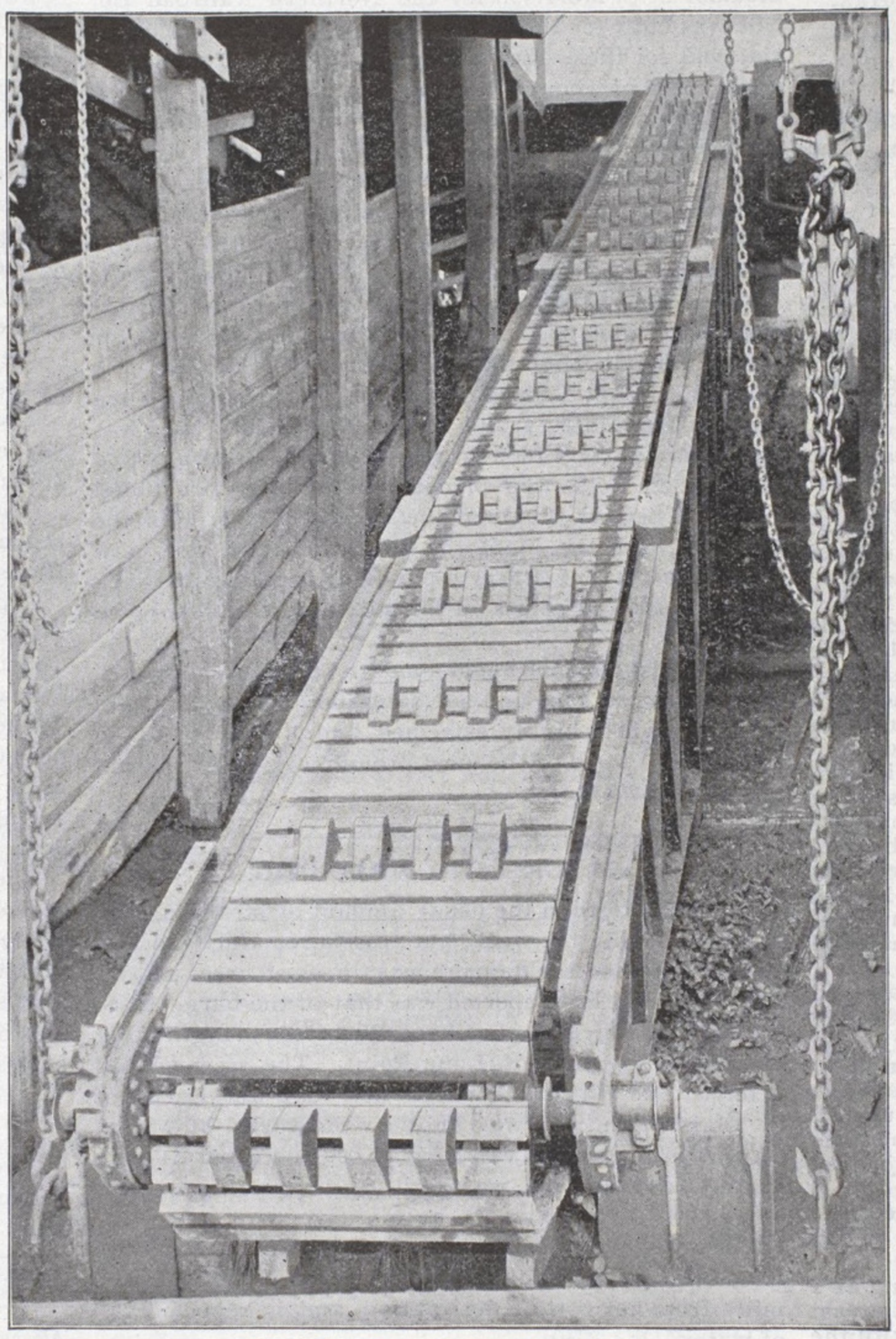
No master, mate, pilot, nor engineer of steam vessels licensed under Title LII, Revised Statutes, shall be liable to draft in time of war, except for performance of duties such as are required by his license; and while performing such duties in the service of the United States every such master, mate, pilot, or engineer shall be entitled to the highest rate of wages paid in the merchant marine of the United States for similar services, and if killed or wounded while performing such duties under the United States, they, or their heirs, or their legal representatives, shall be entitled to all the privileges accorded to soldiers and sailors serving in the army or navy, under the pension laws of the United States.

Sec. 3. That all laws or parts of laws in conflict with this act are hereby repealed. But this shall not be construed to modify or repeal that provision of the act of June 26, 1884, which reads as follows: "In cases where on a foreign voyage, or on a voyage from an Atlantic to a Pacific port of the United States, any such vessel is for any reason deprived of the services of an officer below the grade of master, his place, or the vacancy caused by the promotion of another officer to such place, may be supplied by a person not a citizen of the United States, until the first return of such vessel to its home port; and such vessel shall not be liable to any penalty or penal tax for such employment of an alien officer."

ENDLESS FREIGHT CONVEYOR.

The accompanying illustration shows an endless freight conveyor for loading and unloading vessels, designed and built in 1894 by the Link-Belt Machinery Co., of Chicago, for the Texas & Pacific Railroad Co.'s dock at Donaldsonville, La.

The conveyor is carried by a steel truss, hinged at the inboard end so that the outboard end may rise and fall with the varying height of deck of vessel. The power for driving is furnished by a reversing engine attached to the side of the truss at the inboard end and coupled direct to a pinion shaft which drives the conveyor. The width of the conveyor apron is 48 inches and the blocks are placed, as may be seen in the cut, at intervals, for holding barrels as they go up the incline, and also for preventing bales or boxes from running back when sent up that way. The capacity of the conveyor is limited only by the number of men that can handle and take care of the freight, and it is claimed that by its use a saving of about 25 men may be effected in discharging a cargo. This type of endless apron freight conveyor has been installed at warehouses of Union Steamboat Co., and Western Warehousing Co., of Chicago, and also at the Southern Pacific Railway's Algiers dock at New Orleans.



ENDLESS FREIGHT CONVEYOR.

THE MARINE RECORD, of Cleveland, has alphabetized the names of the vessels making up the American lake fleet, and with each given the names of the master, and where it is a steamer, the engineer. It will be found a handy reference book. The Mirror is in receipt of a complimentary copy of this directory, for which the MARINE RECORD will please accept thanks. Anyone desiring a copy may secure it by sending 25 cents with their address to the MARINE RECORD, Cleveland.—Escanaba Mirror.

TRADE AND INDUSTRIAL NOTES.

The Crane Co. have issued two new beautiful hangers for use in advertising their line of valves. These hangers are of convenient size. One of them portrays a young boy in workman's suit, with all the appurtenances of a finished fitter, gazing with much self satisfaction at one of the Crane patent metallic disc valves. The other hanger shows one of Crane,s high pressure gate valves, size 24 inches, weight 6,200 pounds, and a young miss with outstretched hands, fondly admiring it, and wondering at its massive proportions. These hangers will be sent to all fitters free.

The Bay View plant of the Illinois Steel Co. was shut down June 30 for an indefinite period, the new scale of the Amalgamated Association not having been signed by the company. The closing of the Bay View mills threw 1,200 men out of work temporarily and suspended a pay roll amounting to $3,000 a day. The work of repairing the plant will not be interrupted.

Those who are sufficiently blessed with the acquaintance of the Joseph Dixon Crucible Co., of Jersey City, to be on the mailing list for their monthly calendar blotters, are lucky, for there is no handier or more efficient article in the way of a blotter than the enameled card calendar that this firm gratuitously send to their customers.

P. Dionne, writing to Power, says: "I was using four-bladed propellers on our boats, and decided to try six-bladed ones. After the trial I found the six-bladed propeller to be 25 per cent better than the four-bladed one in both power and economy. The boats which I refer to are the Cook and J. G. Witherbee, running on Lake Champlain."

The Mabel Furnace, at Sharpsville, owned by M. R. Hanna, of Cleveland, and Simon Perkins, of Sharon, made a phenomenal cast of pig iron. The iron weighed 252⅔ tons. The average daily output for the past month has been 220 tons.

The Detroit, Mich., Steel and Spring Co. has been quite busy for a considerable time past and has found it necessary to put the works on double time in order to keep up with the orders.

A receiver has been appointed for the Falls Rivet and Machine Co., of Cuyahoga Falls. The company's liabilities are placed at $375,000 and assets at $615,000. The company was bonded for $300,000 in 1893.

The New York and Cleveland Gas Coal Co., Pittsburg, will erect a large machine shop and foundry at Turtle Creek, Pa., which will be equipped with new and improved machinery.

A PENBERTHY HOLIDAY.

The Penberthy Injector Co., of Detroit, planned an excursion for its employes, customers and other friends next Saturday July 25. The guests will leave the foot of Woodward avenue at 8:30 o'clock that morning on the steamer Sappho, and will go to "Beauvoir," St. Clair River, where three hours will be spent in the enjoyment of music, games, dancing and refreshments. The party will return by steamer, reaching the city at 6 o'clock.

The outing is in celebration of the manufacture and sale of 100,000 Penberthy injectors, during a period of ten years, beginning June 5, 1886, and ending May 12 last. The latter date found the company so far behind its orders that the celebration was postponed until later in the season, when the weather should be warmer and the outing be made more enjoyable.

NEWLY ENROLLED TONNAGE.

Following is a list of lake vessels to which official numbers and signal letters have been assigned by the Commissioner of Navigation, for the week ending July 11:

Official No.	Rig.	Name.	TONNAGE. Gross.	Net.	Where Built	Home Port
34,249	Bge.	C SB.Co.No.6	164.82	164.82	Elizab'h N.J.	Cleveland
34,250	Bge.	C SB.Co.No.7	164.82	164.82	Elizabeth	Cleveland
34,251	Bge.	C SB.Co.No.8	164.82	164.82	Elizabeth	Cleveland
34,253	Bge.*	C SB Co. Beta	151.11	102.76	Elizabeth	Cleveland

* This seems to be an error, as the Beta is a steambarge. If a correction is made, it will probably involve a change in her official number.

ANOTHER SAULT CANAL STATEMENT.

The annual report of the St. Mary's Falls Canal for the year ending June 30, 1896, has just been completed The organization remains the same, consisting of one superintendant, one clerk, three assistant superintendants, three foremen, three engineers, seven watchmen and twenty-seven lockmen. A labor party averaging thirty-three men has been employed.

There have been no accidents causing loss of life or injury to any person. The total delays to the lock during the year amounted to 63 hours. The greatest delay at any one time occurred on June 21, when the schooner Paige entered the lock with her centerboard down and broke the grating and supply pipe connecting, causing a delay of eighteen hours.

The movable dam has been kept in repair. On account of the great pressure in business through the canal it was not closed during the season of navigation. It was, however, closed in December and made tight, so that the canal basin below the dam could be pumped out. The dam was opened again in April.

While the water was out of the canal the piers were thoroughly repaired in all places where their foundations had been undermined.

The pumping plant has been operated once each month and has been used for pumping out the lock three times and three times for testing the gates of the 800-foot lock. It has been kept in perfect repair.

The available draft of water through the canal was less than ever before, the average for the fiscal year being 14.3 feet.

Since the government assumed control of the canal in 1881 there has been expended in its operation and care the sum of $586,702.24.

By an agreement with the Canadian government, an exchange of statistics has been made with the management of the Canadian canal, which enables this office to give complete statements of the entire traffic to and from Lake Superior which is carried by water transportation.

The United States canal was open to navigation during the year 235 days. The Canadian canal did not open until September 9, 1895, thus making their proper season for the fiscal year only 144 days.

There was an increase in the number of vessels of 26 per cent; registered tonnage, 29 per cent; freight tonnage, 22 per cent, and in passenger traffic 15 per cent.

In the items of freight the following increase appears: Anthracite coal, 16 per cent; bituminous coal, 12 per cent; wheat, 77 per cent; manufactured and pig iron, 57 per cent; copper, 6 per cent; iron ore, 22 per cent; lumber, 2 per cent; silver ore, 150 per cent; unclassified freight, 9 per cent.

No comparison can be made in the item of grain. All east bound grain other than wheat and corn has heretofore been included in the item of unclassified freight. Owing to this, the increase of 873 per cent is abnormal, but as unclassified freight still shows an increase of 9 per cent, it is still safe to say that grain made its usual gain.

The item of flour shows a falling off of 10 per cent. This is, however, fully compensated and accounted for by an increase in wheat of 77 per cent.

Building stone is the only other item on which a decrease appears, and the traffie on this article is so small as to be unworthy of consideration. The item of salt shows a variation of less than 1 per cent.

The following table is a total statement of the traffic to and from Lake Superior during the fiscal year, including that of the Canadian canal:

ITEMS.	U. S. Canal.	Canadian Canal.	Total.
Vessels, number	16 290	2,909	19,199
Lockages, number	7,125	1,693	8,758
Tonnage, registered, net tons	15,648 025	2,341,123	17,989.148
Tonnage, freight, net tons	14,399,332	2,201,835	16,601,167
Passengers, number	28 518	3,929	32,447
Coal, hard, net tons	434,845	60,519	495,364
Coal, soft, net tons	2,380,586	354 945	2,735.531
Flour, barrels	7.570,201	601,751	8,171,952
Wheat, bushels	48,933,340	10,139,134	59 072.474
Grain, bushels	11 865.127	2,768 929	14,634,056
Manufactured and pig iron, net tons	99 801	4.709	104,510
Salt, barrels	254 093	8 241	262.334
Copper, net tons	106,881	5,662	112,543
Iron ore, net tons	7.217,309	1,235.901	8,453,210
Lumber, M. ft. b. m	725,230	20,385	745,615
Silver ore, net tons	100	.....	100
Building stone, net tons	18 527	1.606	20,133
Unclassified freight, net tons	418,855	79,255	498,110

The United States canal was opened to commerce during the fiscal year 235 days, from July 1 to December 11, 1895, and from April 2 to June 30, 1896, all dates inclusive.

The Canadian canal was opened to commerce during the fiscal year 144 days, from Sept. 9 to Dec. 6, 1895, and from May 9 to June 30, 1896, all dates inclusive.

The second table shows a comparison of traffic through the American canal (ignoring the Canadian canal) for the fiscal year ended June 30, 1895 and 1896 respectively:

ITEMS.	FISCAL YEARS.		INCREASE.		DECREASE.	
	1895.	1896.	Amount.	Per Ct.	Amount.	Per Ct.
Vessels, number	15,255	16,290	1,035	07	.....	.....
Lockages, number	6 452	7,125	673	10	.....	.....
Tonnage, registered, net tons	13.947,613	15,648 025	1,700.412	12	.....	.....
Tonnage, freight, net tons	13.636,270	14,399,332	763,062	06	.....	.....
Passengers, number	28,309	28,518	209	01	.....	.....
Coal, net tons	2,860,770	2,815.421	.....	.....	45 339	02
Flour, barrels	9,075 775	7.570,201	.....	.....	1.505 574	17
Wheat, bushels	33,380,064	48,933 340	15,553,276	47	.....	.....
Grain [other than wheat], bushels	1,503 899	11,865 127	10 361,228	688	.....	.....
Manufactured and pig iron, net tons	76,318	99 801	23,483	30	.....	.....
Salt, barrels	262,986	254,093	.....	.....	8,893	03
Copper, net tons	105.931	106 881	950	.....	.....	.....
Iron ore, net tons	6,927.246	7,217.309	290,063	04	.....	.....
Lumber, M. ft. b. m	732,911	725,230	.....	.....	7,681	01
Silver ore, net tons	40	100	60	75	.....	.....
Building stone, net tons	23,857	18,527	.....	.....	5 330	22
Unclassified freight, net tons	457,547	418,855	.....	.....	38,692	08

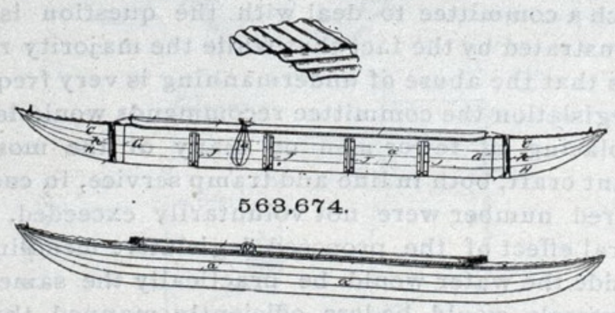
During the fiscal year lately ended there passed through the canal, in 7,125 lockages, 16,290 vessels, with a total registered tonnage of 15,648,025, carrying a total freight of 14,399,332 net tons. The total time during which the lock was operated was 4,644 hours and 52 minutes, the average time spent in making a lockage being 39 minutes and 7 seconds. The total time spent by vessels in passing the lock was 8,986 hours and 40 minutes.

The net cost of operating the canal, which includes all repairs and improvements made by the operating and care force and labor party and the purchases therefor, was $60,763.28, divided as follows: Office expenses, $1,375.93; general purchases, $1,845.41; repairs, $23,-131.17; labor, operating and care, $29,714.45; extra labor, $2,825.19; lights on locks, $1,871.13. The cost per lockage was $3.54, and per each vessel passing through, $3.73. The cost per registered ton was 3.88 mills, and per registered freight ton, 4.22 mills.

A NEW TYPE OF SMALL METAL BOAT.

Mr. Wm. H. Mullins, of Salem, O., whose advertisement of metal pleasure and hunting boats appears elsewhere in this paper, and who is meeting with much success in introducing this class of boat, has just patented a new type (No. 563,674) which serves to protect contemplated improvements in the boats to be manufactured by him. The claim is as follows;

A boat or skiff provided with air-tight compartments respectively at the bow and stern thereof, the decks of



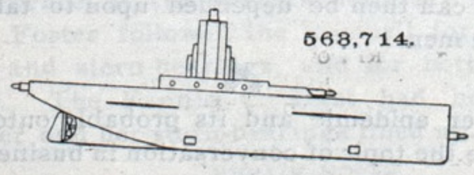
563,674.

said compartments composed of double metallic corrugations as described, and said compartments provided with metallic tubes passing substantially vertically therethrough to serve the purpose of stays or braces and also to receive anchor chains or ropes, and a continuous line passing through said tubes, the outboard or lower ends thereof bearing anchor-weights.

A NEW SUBMARINE BOAT.

A new type of submergible vessel has been patented by Louis Gathman, of Chicago, on which application was filed Aug. 21, 1894. The patent number is 563,714, and the claim is as follows:

A submergible vessel provided with an upright tube or hollow mast extending from below the deck of the



563,714.

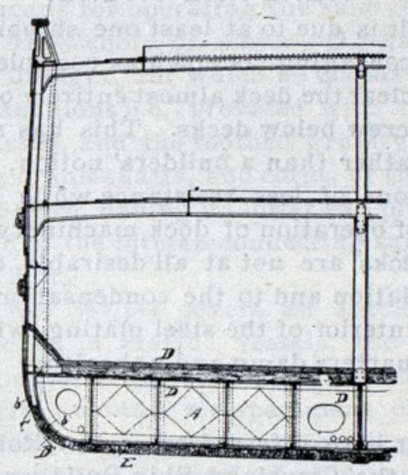
same and having a transparent upper end, a compass in the upper end portion of said tube or mast having transparent upper and lower sides, a telescope in the lower end portion of the tube or mast, a lighting device above said compass, and means of observing said compass.

The combination with a submergible vessel provided with ordnance-pieces having a fixed position with relation to the vessel, of an upright sighting-tube rigid with said vessel and provided at its upper end portion with a reflector and at its lower end portion with a telescope to receive the light reflected therethrough, one of the lenses of said telescope being a telescopic sight.

In a submergible vessel, a plurality of rigid sighting-tubes situated approximately midway between the ends of the vessel, said sighting-tubes varying in height and provided at their upper end with reflectors and at their lower end with telescopes.

BOTTOM SHEATHING OF VESSELS.

Mr. George F. Williams, formerly superintendent of F. W. Wheeler & Co's shipyard, West Bay City, has obtained a patent on his system of vessel construction, relating particularly to wood sheathing on metal bot-



toms, for which he filed application over a year ago, the patent is No. 563,347, and the claim is as follows:

1. In a vessel the metal covering A having offset and inset parts, the connecting-bar C, between the inset and offset parts, and the wooden sheathing secured to the inset part and having its outer surface flush with that of the offset part.

2. In a vessel the offset metal covering A, the frames B, and the inset frames B′, a bar secured to both sets of said frames and the wooden sheathing secured to the inset part and naving its outer surface flush with that of the offset part.

3. In a vessel the offset metal covering A, the Z-shaped bar secured to both parts of the said covering and the wooden sheathing secured to the inset part and having its outer surface flush with that of the offset part combined with the frame-irons B and B′, said frame-irons B′ overlaping the irons B and bolted thereto and to the Z-shaped irons.

4. In a vessel the upper outer metal covering, extending below the water-line, the inset metal covering, the Z-shaped bar connected to each part of the covering and joining the same and a wooden sheathing covering the entire bottom of the vessel and having its exterior flush with that of the offset metal cover.

During June Scotch shipbuilders launched 24 vessels of 28,350 tons, against 36 vessels of 32,830 tons, in May, and 29 vessels of 45,525 tons in June, 1895. During the first half of 1895 Scotch shipyards have put into the water 201,292 tons, as compared with 191,830 for the corresponding period of last year, 183,488 tons in 1894, 132,691 tons in 1893, and 210,-884 tons in 1892. English builders launched 27 steamers and one torpedo boat destroyer in June, as compared with 23 vessels in the previous month.

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HERE AND THERE.

Great credit is due to at least one shipbuilder on the lakes for discouraging, as much as possible, the modern tendency to clear the deck almost entirely of houses, and to place the crew below decks. This has seemed to be an owners' rather than a builders' notion, anyway, and for the reasons of less resistance while running and facilitation of operation of dock machinery. The quarters below decks are not at all desirable, owing to the lack of ventilation and to the condensation which takes place in the interior of the steel plating, which tends to make such quarters damp and unhealthy.

***

The builder here referred to is Mr. Robert Wallace, president of the Cleveland Ship Building Co., and the men employed on lake steamers owe him more than they have any idea of for the interest he has shown in this direction. He has pressed the point of good quarters for the crew with great vigor and tenacity of purpose, even when building them according to his plans involved an increased cost to the company, and consequently a smaller profit. But Mr. Wallace got his start as a lake engineer, and his memory covers more than the technical experience gained thereby. He remembers how closely the lake engineer had to attend to his duties while on watch, and he realizes that the strain is all the greater now that the engines are so much more extensive and complicated, and that the higher grade of steamers are almost continually under way. Mr. Wallace knows, therefore, how necessary it is that the engineers must have a thorough rest, with well-ventilated sleeping apartments, undisturbed by near-by noises as much as possible, and this has been uppermost in his mind after strength and other absolutely essential qualities with every ship that has come out under his administration. He thinks of the firemen as well, and contends that furnishing good quarters for them is in the direct line of economy, as twice as much work—quantity and quality both being considered—can be obtained from firemen who have comfortable quarters to resort to when they leave the stokehold as can be done by men not well cared for. In this opinion he is ably seconded by General Manager James Wallace, his son, who received a share of his engineering education as a practical man on shipboard.

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We nowadays very frequently hear the question, "What is becoming of all the small tonnage, now that the advent of large ships has made freights so low?" The visions of long lines of schooners and small steambarges tied to the docks, rotting away slowly but steadily, do not seem to be realized except in isolated cases. The fact is that business ability can be shown in the management of small as well as large craft, and it must not be forgotten that there are a good many channels of trade in which the little fellows cannot be superseded. The Welland canal will not be enlarged for some years yet, and the lumber trade, by reason of the size of the usual cargoes, is best adapted, with a few exceptions, to the smaller boats. A steamer like the Aragon, with a capacity of 1,800,000 feet, is all very well, because she was built especially for the trade, and is owned by parties who have large lumber interests and thus enjoy great advantages in securing for her such cargoes as will permit full utilization of her capacity. But an ordinary steamer of her dimensions, with a full spar deck, would be a very clumsy craft to load and unload. Then, as before stated, the amount of single consignments is nearer the ordinary loads of 350,000 to 750,000 feet. As showing what can be done with one of these little fellows over which so many crocodile tears are shed, attention may be directed to the schooner Hunter Savidge, of 152 tons burden and only 117 feet long. She is now owned by John Mullerweiss, Jr., of Alpena, and arrived in Cleveland Sunday with lumber from Alpena, this being the first of a series of reasonably profitable charters. She left with coal for Port Huron, and at the latter port is to take on grain for Kingston at 4 cents. From Kingston she proceeds light to Oswego, where she will load hard coal for Toledo. At Toledo she gets grain for Buffalo, and there will load hard coal for Sand Beach, taking on at the latter port a cargo of supplies for her owners. A few of the keener captains resort to the primitive custom of buying in one place and selling in another, making a big freight out of the margins.

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It is not improbable that some of the labor men in Congress will bring forward during the short session one of the three or four obnoxious manning bills introduced last winter; and it may not be out of place to state that the British maritime world is bothered by the same sort of impertinent supervision and alleged reform that tends so to hamper American shipping. A commission appointed some time ago in Great Britain to investigate the manning of vessels has just made its report to the British Board of Trade—or rather its reports, as there is a great deal of dissension to the statements and recommendations of the majority report, which seems to have been drawn up before the testimony was taken, it is so much the expression of the preconceived ideas of certain members who are anxious to shine in certain political circles. The incompetence of such a committee to deal with the question is best demonstrated by the fact that while the majority report states that the abuse of undermanning is very frequent, the legislation the committee recommends would lead to the placing of fewer men on many of the most important craft, both in line and tramp service, in case the required number were not voluntarily exceeded. The general effect of the proposed legislative meddling on this side the water would be practically the same—the lake vessels would be less efficiently manned than at present. The best economy in the management of a vessel requires her to be properly manned, so far as safety is concerned, and any undermaning in this respect would tend to vitiate the insurance policy and throw any loss entirely upon the owners. The only branches in which there is any complaint of insufficiency of help is in regard to firemen, oilers, etc., the number of whom is not always very material when a ship is in dire distress by reason of heavy weather. The proposition in England, as on this side, is to regulate the manning by the tonnage, without regard to the nature of either rig or machinery. If there is any standard more misleading than that of tonnage it would be hard to find. If Congress wants to assist the people who man American vessels let it adopt such measures as will give the vessels a chance at the world's commerce, and the owners can then be depended upon to take proper care of the men.

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The silver epidemic and its probable outcome continues to be the topic of conversation in business circles. There is a prospect of a restoration of confidence before the fall election, growing out of the fact that the greater proportion of the pro-silver element entertain that sentiment in the hope that it will possibly better their condition, which, they think, could hardly be made worse. This is particularly true of the agricultural element. If these people are once convinced that they are cherishing a delusion—and it is not like converting people from set opinions—they will renounce the heresy and come over to the sound money side in droves. This is largely a matter of sentiment with them, with only enough reason mixed in to make the situation rather dangerous. Being easily influenced by sentiment, it has been suggested that a revulsion of feeling might be created by the banks and large industrial firms paying with silver instead of paper money. The effect of such an object lesson in thickly settled districts is open to some question; but it has been tried with good effect in one of the most important mining districts of Michigan. One company controls nearly all the mines in this district, and for six or eight weeks the men were paid off in silver coin. As representing only one or two weeks' wages of one man the silver was inconveniently bulky, but when it accumulated in the general stores and the banks the effect was appalling. There wasn't safe or vault capacity enough in the county to take care of the stuff, and the protests were long and deep. Still the silver kept pouring in until the business men sent a deputation to the company's officials and the flood was checked. There was some talk of shipping the coin to Lake Superior in ore dump cars and sending a cargo to Cleveland on a 60-cent freight, but finally a train was secured to take a lot of the stuff to a place of safety and notes were substituted and quiet was restored. But if that county polls a single free silver vote it will be that of some one who settles there between now and November.

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Reverting to the question of legislation obnoxious and hurtful to water commerce, a case has come up in Australia which shows more emphatically than ever the unreason and short-sightedness which pressed forward the recently killed Detroit bridge bill. The commerce of Sidney, N. S. W., for the year is but a small fraction of that passing through Detroit River in a season of eight months. Although Sydney boasts the finest harbor in the world, yet the British merchant marine interests have lost no time in protesting against a movement leading to the construction of a bridge across the harbor, connecting the city with the north shore. As voicing the sentiment of shipowners, Fairplay, of London, says; "It would seem that a connection of some kind is urgently needed, but, looking at the matter from a shipping point of view, I trust the government will never sanction a scheme which cannot fail to set back the welfare of the leading port in Australia. It is proposed to have a clear height of 150 feet from the water to the center span, while vessels the height of which from truck to water level exceeds 140 feet are not to be allowed to pass without special permission. If the center span were 190 to 200 feet there would be less cause for complaint, but shipmasters of the large class of vessels frequenting Port Jackson have quite enough on their minds now without having to strike their topgallant masts to get to their loading berth, or failing that, having to face the probability of the said spars tumbling about their ears. *Nor are bridge piers at the best of times conducive to safe navigation.* It would seem that there is another proposal before parliament for an electric railway under the harbor. This seems more to the point, and judging by experiences on this side, ought to answer admirably. Why, therefore, raise expensive obstructions to the shipping of the port? I note that the leading Sydney loading brokers and steamship agents have filed a protest which ought to prove effectual in smothering the idea." The analogy between the two cases is so obvious that further comment is unnecessary.

W. L. Brown, president of the Chicago Ship Building Co., whose interview in regard to his recent European trip and contrast between the conditions of the shipbuilding industry there and on this side attracted so much attention both at home and abroad, declares himself a strong advocate of protecting shipowners in order to build up our American marine.

During the month of May 1,360 vessels, with a net capacity of 139,787 register tons, passed through the North Sea and Baltic Canal, and the dueslevied amounted ed to £3,910. This is far below the amount of traffic reckoned upon.

SHIP BUILDING AND REPAIRS.

NEARLY READY TO FLOAT.

Several more of the new ships building for the Bessemer Steamship Co. are about ready to put into the water. The launch of the steamer Sir William Siemens, sister ship to the Sir Henry Bessemer, will occur at the Globe shipyard next Saturday, the 25th inst, at 10:30 a. m.

The Sir William Fairbairn, the first of the two steamers building for the same company at the Wyandotte yard of the Detroit Dry-dock Co., will probably be launched on Saturday, August 1. Her sister ship, the Robert Fulton, will be launched a few weeks later. Mr. F. A. Kirby, of the Wyandotte yard, is to take a trip through foreign shipyards soon. The steamer Senator is ready for delivery to her owners this week.

Capt. James Davidson, of West Bay City, expects to launch very soon the larger of the two wooden steamers which he is building on his own account. He has a tug in frame which he is building for himself, and another for Capt. B. B. Inman, of Duluth.

Work at the yard of F. W. Wheeler & Co., West Bay City, has been impeded by the strike of their emloyes. After waiting a reasonable length of time for the men to return to work, the company has posted notices that the establishment will be known hereafter as strictly non-union, and the men must return to work on that basis or not at all.

The steam yacht which is being built for Mr. Eugene Higgins, of New York, was launched Tuesday afternoon of last week at Glasgow, Scotland. The craft, which is to be the most sumptuous of its kind afloat, and to cost $100,000, is to be of 1,500 tons register, and to have a guaranteed speed of 16½ knots an hour. Mr. Higgins is a member of the New York Yacht Club, and owner of the twin-screw steam yacht Varuna.

Dunbar & Sullivan, of Sault Ste. Marie, Mich., have declared their political sentiments by christening their new steel scow Gold Standard. The scow was launched on Tuesday of last week. She has a capacity of 228 cubic yards, and is the second of this kind built by the firm. She measures 89 feet in length by 25 feet 4 inches in breadth and 11½ feet in depth. She was at once placed in commission.

The steamer Joseph L. Colby was put together in time for launching at Ogdensburg Saturday, after her trip up the St. Lawrence. She took on fuel in Cleveland Wednesday and continued on her way up the lakes light to Duluth.

CONTRACT FOR A NEW FIREBOAT.

The City of Milwaukee has awarded the contract for building its new fireboat to Rieboldt, Wolter & Co., of Sturgeon Bay, who have already laid the boat down. She will be 107 feet long over all by 24 feet beam and 11 feet molded depth. She will be built entirely of Wisconsin oak of the finest quality, cut in the vicinity of New London, Wis., and the bottom will be sheathed with steel up to a foot or so above the water-line. The engines will be double, 18x20 inches, with steel frames, and her screw will be eight feet in diameter. She will also have two sets of pumps, with a capacity of 6,000 gallons per minute, air pump and steam steerer. The contract for all the machinery, except the boiler, has been awarded to the Charles F. Elmes Engineering Works, Chicago. The shaft and wheel will, of course, be put in before launching, but the other machinery will be put in at Milwaukee. Consequently the hull builders will put up the pilot house and cabins in sections, and complete their work at Milwaukee. Rieboldt, Wolter & Co. will receive $11,490 for their work and the Elmes Engineering Works $15,000. The new fireboat was designed by Mr. John Conrad, of Milwaukee, who will also superintend her construction.

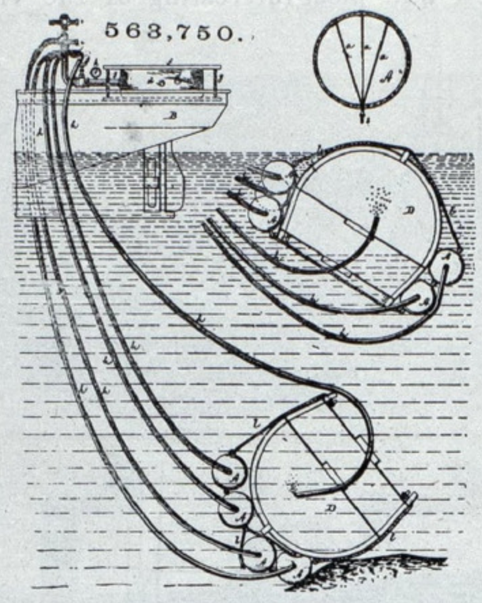
GENERAL REPAIR WORK.

CLEVELAND—The cases of repair work which have not heretofore been mentioned as under way are very few. Within the past few weeks at the Ship Owners' dry dock the Parks Foster has had a temporary patch put over the hole she made by striking a rock at Sandusky; the schooner Dolly Morden, which had been struck by the Wallula at the Limekiln, had some planking done on her side and on the bluff of her port bow. The Cambria had a bracket put on her wheel, and the tugs Sunol and William Kennedy had their wheels patched. The rebuild of the steamer V. Swain is nearly completed, and she will probably be ready to go into commission again by August 10. The new tug Oscar C. Stedman, building for harbor work at Huron, is going forward rapidly and has already been painted. She may be delivered by the 1st of the month, although there is a good deal to do on her machinery.

The Cleveland Dry Dock Co. still have the schooner Kent in dock, but will have her rebuilt far enough along to float her by Saturday. The rebuild of the Olive Jeannette's cabin and stern are practically finished and she will go to a dock to load coal to-morrow.

CHICAGO—The Independent Tug Line have removed their floating dry-dock from Illinois Central slip C to the north branch on the east side of the river between Kinzie and Indiana street bridges, where the company has been dredging the river to a depth of 18 feet to allow their floating dry-dock sufficient depth to take vessels and tugs into it. The tug R. Prindiville will go

563,750.



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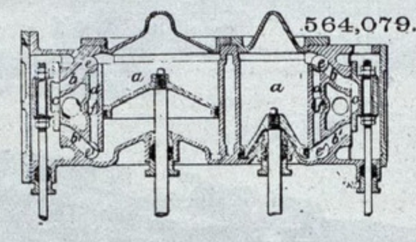

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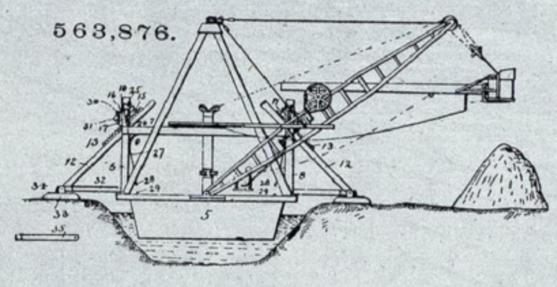

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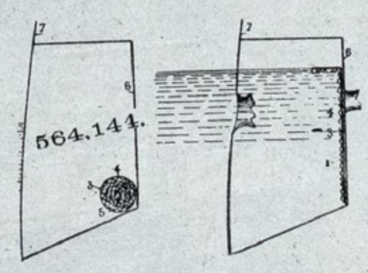


into their dock for general repairs and calking in a day or two.

At Miller Bros.' shipyard the steamer James H. Prentiss is in dock for a new forefoot, repairs to her stern bearing and wheel, and re-calking her bottom. The steamer Alice M. Gill is in for a new shoe.

William Saville, shipbuilder, has given the tugs Tom Brown and R. Prindiville a thorough overhauling. The Tom Brown has gone into commission for the Chicago Towing Co., and the Prindiville will go into commission for the same company in a few days.

STURGEON BAY.—The steamer J. E. Rumbell was on the floating dry-dock for several days for repairs to her wheel and stern-bearings, recalking of butts, bottom scraping and painting. She will go on again soon for a new wheel of the Sheriffs pattern. The steambarge I. N. Foster followed the Rumbell for repairs to her shoe and stern-bearings, and for bottom calking forward. The Fannie C. Hart had her wheel keyed tighter and her stern-bearings lined up.

REPAIR NOTES.

The steamer North West got a new wheel at the West Superior dry-dock Monday.

Samuel F. Hodge & Co., of Detroit, are fitting a new sectional wheel to the steamer E. W. Oglebay, with a view to improving her already fast performance. It was shipped to Chicago last week and will be placed there.

The engine of the little steamer Hilton went through itself at Milwaukee just after an overhauling. The work is now being done a second time.

The H. E. Runnells has been getting a new stem at Jenk's shipyard, Port Huron.

NEW INVENTIONS.

Mr. Charles Cummings, of Chicago, has just patented (No. 563,750) an apparatus for raising sunken vessels, the operations of which are pretty well shown in the illustration. The claim is for a truss-bag composed of an inflatable body, a series of straps that are attached within and project out of said body, and means for connecting the exposed ends of these straps; the combination of this truss-bag with an air-forcing apparatus composed of a flexible body, a superposed platform, and springs connected to the platform and adapted to collapse the flexibly body.

A speed governor for marine engines, a device which has been patented in England since Dec. 6, 1890, has just been protected in the United States (No. 564,079), Owen Jones, of London, being the patentee. The claim for the combination, with an engine cylinder, of valves adapted to simultaneously cut off communication between both ends of said cylinder and the steam chest and exhaust port and exhaust space thereof, and at the same time open communication between the two ends of said cylinder. These valves are located in the admission ports or passages of the cylinder, there being also a supplementary port or passage connecting the said admission ports or passages and a valve for varying the cross sectional area of the said supplementary port or passage; also of means for operating the said valves.

George H. Nichols, of Akron, O., has patented (No. 563,876) a dredger, for which he claims the combination of the stanchions 6 6, provided with the semi-circular faced bracket, and the toothed gravitypawls and their operating crank-shafts, and cords, of the spud, provided with rack-teeth, having its lower end pivoted to a ballast block, and of the pitman connecting said spud and block the stanchion.

Patent No. 564,144 covers an automatic means for closing leaks in marine vessels, the invention of M. Henri Bricard, of Havre, France, who claims the combination, with an inner compartment of a vessel, of a flexible, bouyant mat attached by one edge to the inner face of the interior wall of said compartment, and adapted to be unrolled and floated by water entering said compartment to close an opening in said interior wall. This mat is to be formed of flexible material and provided with floats and stiffening supports, said mat being secured by an edge to the lower part of the inner face of said interior wall of said compartment, with the stiffening parallel with the line of attachment, and, the mat being rolled from its free edge, the water entering said compartment will unroll and buoy the mat up against the inner wall and over any opening therein.

THE FREIGHT OUTLOOK.

The scarcity of ore dock room is a very bad factor in freight conditions at present, as considerable scheming and some delay is occasioned in finding room for the cargoes which are constantly arriving. Almost none is being forwarded to furnaces, and the conditions must soon develop a very bearish influence on lake freights. The rates remain at 60c from the head of Lake Superior, 55c from Marquette, and 45c from Escanaba.

Grain may soon begin to move, but this will be considered more of a relief than as a positive improvement. Duluth shippers are now paying 1½c on spot boats to Buffalo, but only 1⅜c on boats to arrive. Chicago is paying 1c to Buffalo, and what little is shipped from Milwaukee goes at the same rates.

Coal shipments continue good, but this will probably be at the expense of the shipments usually made later in the fall. Soft coal pays 30c to Duluth, and 35c to Lake Michigan and Green Bay. Hard coal pays 30c to Lake Michigan.

The Queen City arrived at South Chicago last Saturday with 4,067 gross tons of iron ore from Duluth, the largest Lake Superior cargo on record.

THE HARBOR OF VLADIVOSTOCK,

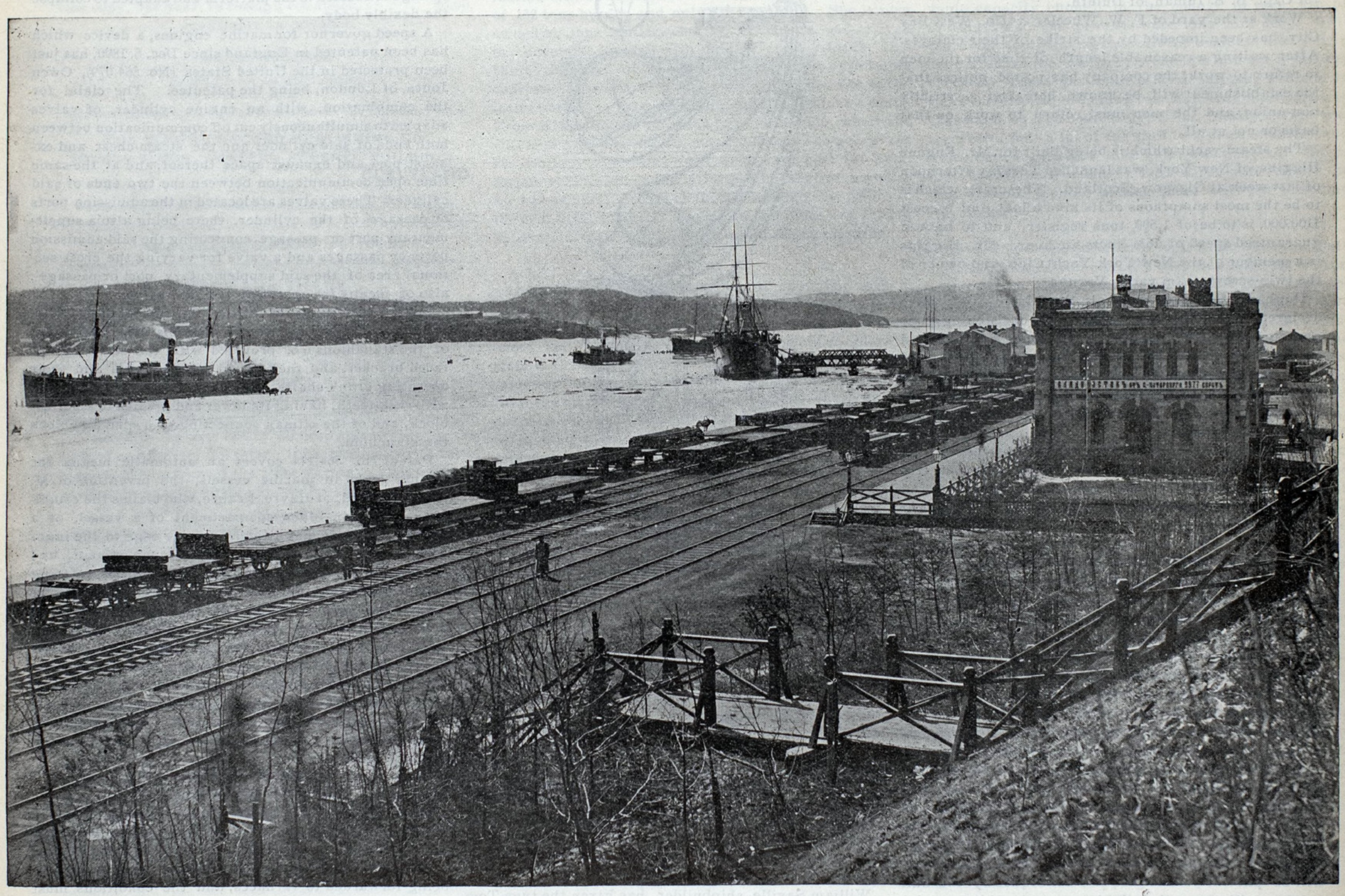
AND THE TRANS-SIBERIAN RAILWAY.

Lodian, the well-known and eccentric traveler, who last winter contributed an article to THE RECORD on cattle transportation by water, has sent to Locomotive Engineering some fine photographs of the Trans-Siberian Railway, the eastern division of which has been completed. Lodian has started on a long tramp, from Vladivostock, through Siberia and Russia, his intended destination being St. Petersburg. He writes: "It was a pleasure to clear inland from Vladivostock; it is a town of about 20,000 inhabitants without a single made road or street. They are either awfully muddy or extremely dusty, and always filthy, fetid and revolting. After nine weeks spent in Japan, Siberia was disappointing in the start. On our steamer coming up were 400 Chinese navvies for the Siberian road, and the stench from them was awful. My next address will be Irkutsk, Central Siberia."

The Trans-Siberian Railroad is being constructed in sections from both ends and from intermediate points accessible by steamer. It is now possible to travel by rail from St. Petersburg to Omsk, a distance of 2,673 miles. From Omsk to the Ob River, 384 miles, the rails are laid, but the ballasting is not complete. On the next section, that from the Ob River to Krasnoyarsk, 467 miles, the rails are also laid and a beginning has been made on the iron bridge, 2,800 feet long across the Ob, that is to join the two sections. On this section many of the smaller bridges are built and half the earth work is completed. The next section is to Irkutsk, 672 miles, and it presents many difficulties; nearly two fifths of the earth work is finished. At this point Lake Baikal is to be crossed, and it was for this purpose that the Russian government, which is constructing the railroad, negotiated with the Detroit Dry-Dock Co., for the construction of two large ice-crushing car ferry steamers, similar to the St. Ignace and Ste. Marie, in service at the Straits of Mackinaw. It is considered hardly likely that this contract will be awarded on this side the Atlantic, although the general designs of the lake boats will be followed. The boats will, of necessity, be constructed on Lake Baikal, which has no navigable outlet to the sea.

Beyond Lake Baikal the distance to the head of navigation on the Ameer River is 701 miles, and on this section work has begun from the Pacific end; but the difficulties are very great, and much tunneling will have to be done, as the line has to rise to a plateau over 3,500 feet high. The next section presents the greatest difficulties, as the line has to be carried through a marshy region which, during the heavy rains is often completely submerged. The line from Vladivostock is completed for 250 miles.

The largest and most interesting of the views presented in Locomotive Engineering, we here reproduce by courtesy of that most excellent contemporary. It shows the far eastern terminal of this great railway, Vladivostock harbor, distant 9,877 versts (6,547 miles from St. Petersburg. The picture is a winter scene, the great ships being ice-locked soon after coming to their anchorages, the ice forming so solidly as to permit of safe passage to and from land. This is often a money-saving circumstance, as the ice forms a temporary wharf with the assistance of long planks by which solid ice may be reached with heavy loads at a safe distance from the vessel. The terminals of the railroad are shown with that extent of water front which is always appropriated, and which in this case almost brought about international difficulties. One very presentable wharf is seen, and the picture shows the vast possibilities of which water and rail transportation will avail themselves to convert Vladivostock from an unorganized community into a thriving modern city a decade hence.



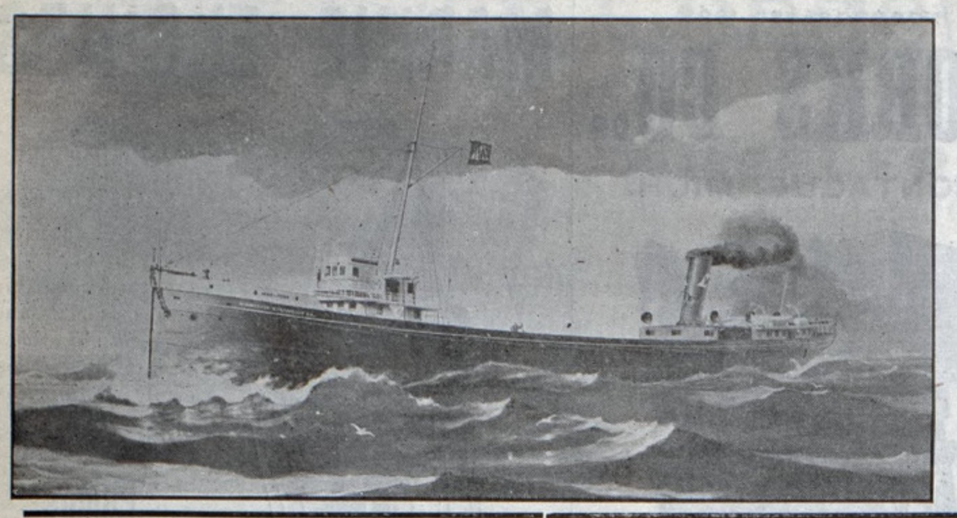
THE HARBOR OF VLADIVOSTOCK—TERMINAL OF THE TRANS-SIBERIAN RAILROAD.

The North American Review opens its July number with a contribution by Moses Coit Tyler on "The Declaration of Independence in the Light of Modern Criticism." "After the Coronation at Moscow" is the title of an admirable paper by Karl Blind. Rev. Francis E. Clark, D. D., writes entertainingly on "Some International Delusions," as cherished by the people of England, the United States and Australia with regard to each other. The physical and legal conditions of "Arid America" are ably discussed by W. E. Smythe, prominent in the national irrigation congress. "Sound Money the Safeguard of Labor," by Hon. R. B. Mahany, of Buffalo, is a succinct statement of the evils which the free coinage of silver would entail upon the American workingman. Various phases of the woman question are dealt with in everything but a prosy style.

We have received Beeson's Marine Directory all right and think it is very nice.—H. J. Webb & Co., Cleveland. Price $5, at MARINE RECORD office.

PROPOSALS.

U. S. ENGINEER OFFICE, 185 Euclid Ave., Cleveland, O., June 30, 1896. Sealed proposals for dredging at Sandusky Harbor, Ohio, will be received here until 2 o'clock p. m., Standard time, August 7, 1896, and then publicly opened. Information furnished on application. JARED A. SMITH, Lt. Col. Eng'rs. 30-31



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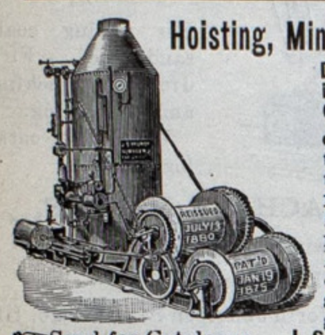

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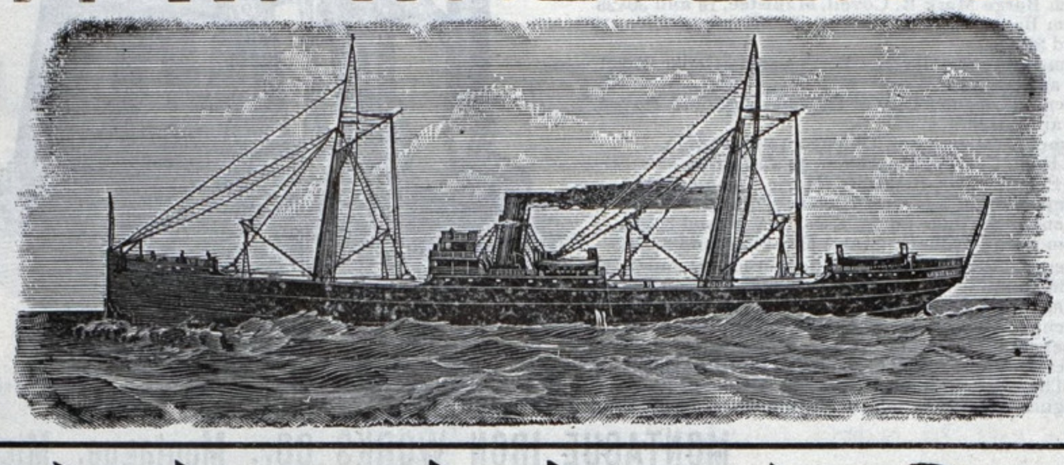

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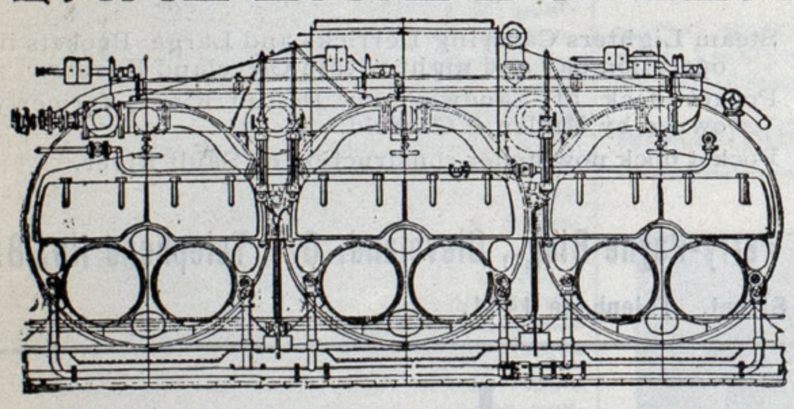

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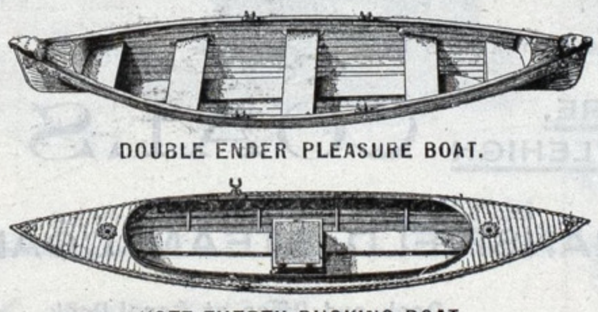

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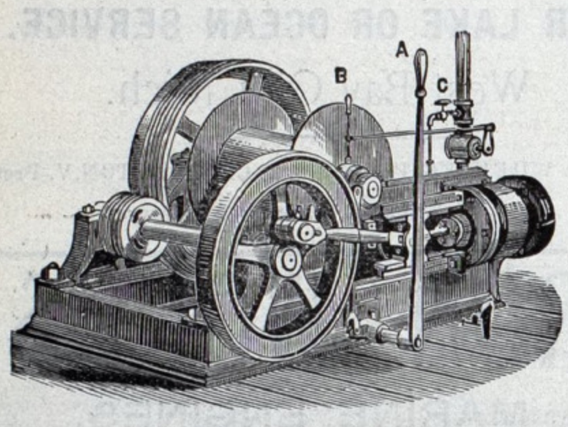

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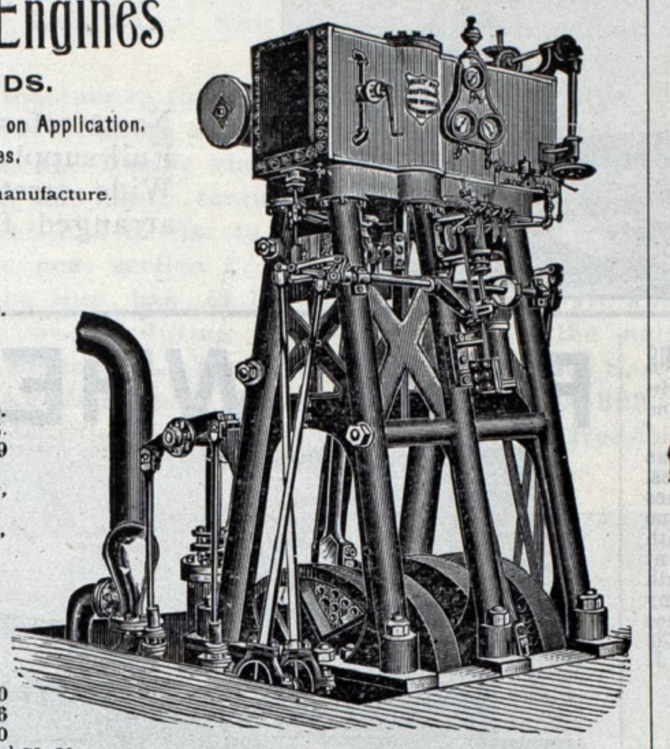

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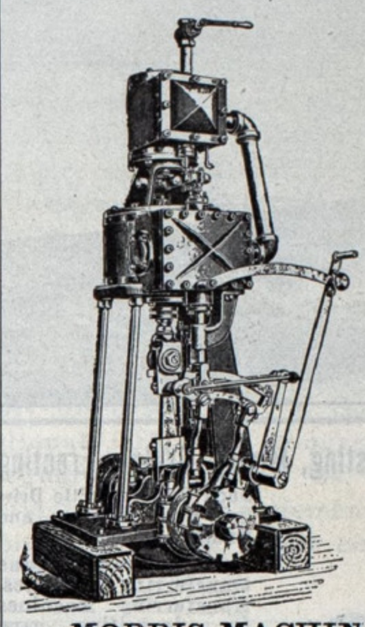

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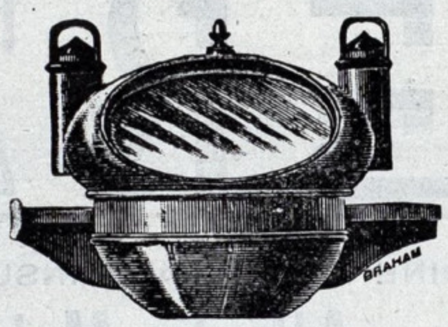

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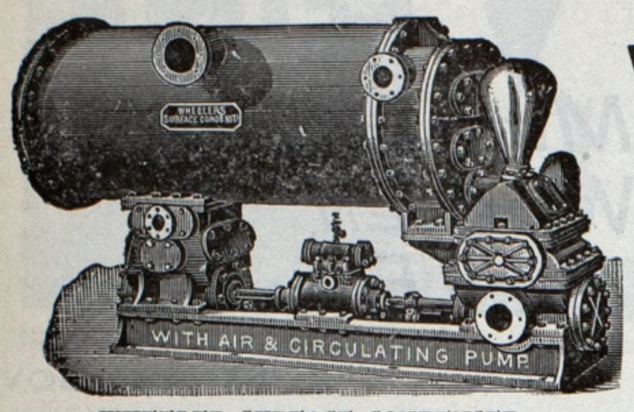

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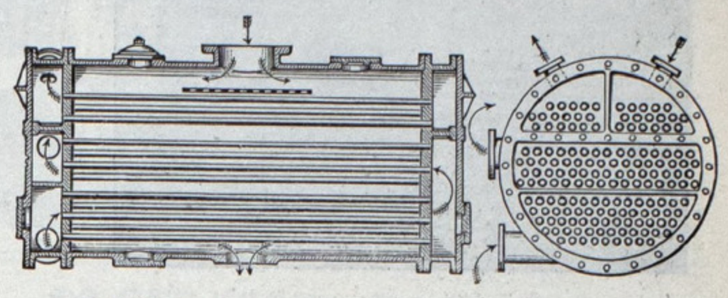

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D. T. Helm	14x72	(2) 17x17	83	68	18	9.3
E. P. Ferry	12x72	20x20	80	66.8	15	7.6
Black Ball No. 2....	12x72	18x20	73	58.6	15.5	8.4
A. A. Carpenter ...	12x72	18x20	75	60	15.6	8.6
Thomas Hood.....	13x72	18x20	71	59.5	15.6	8.6
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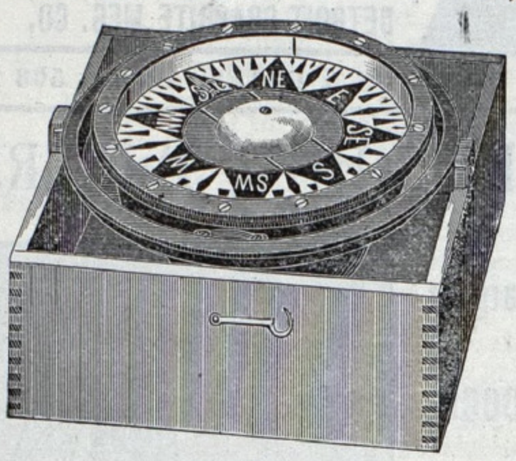

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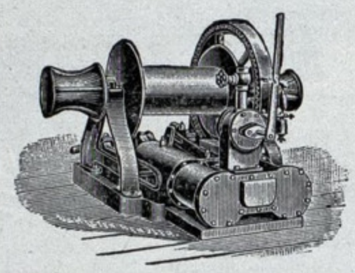

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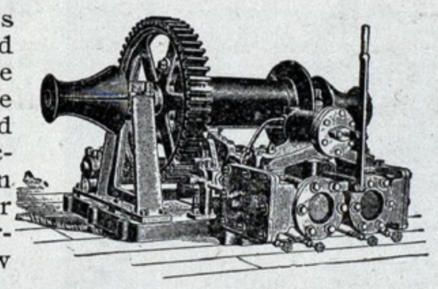

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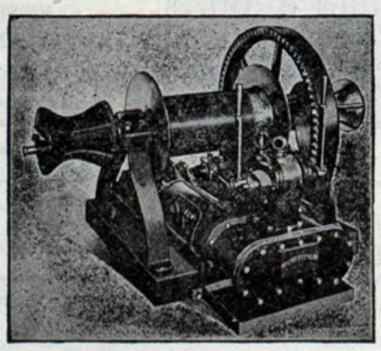

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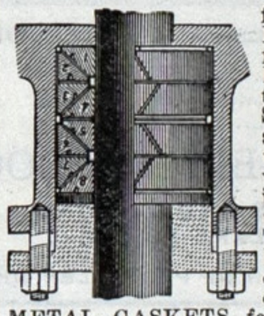

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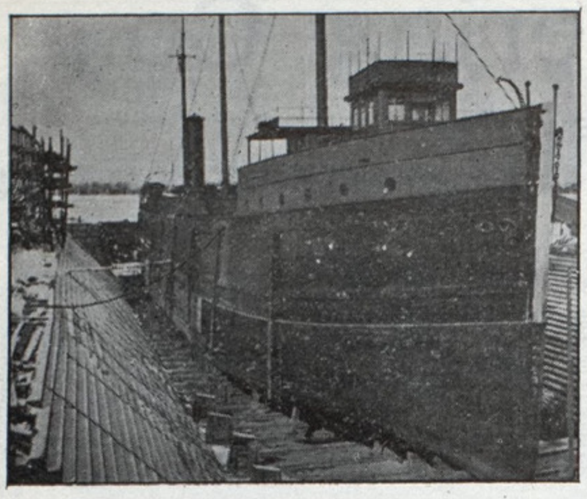

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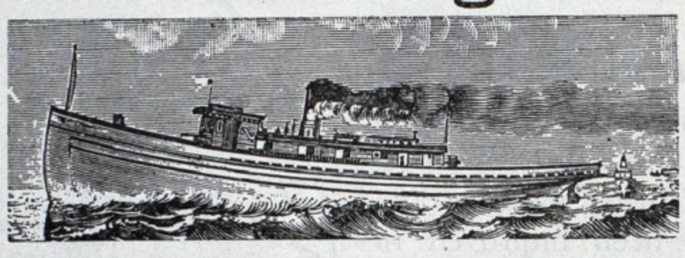

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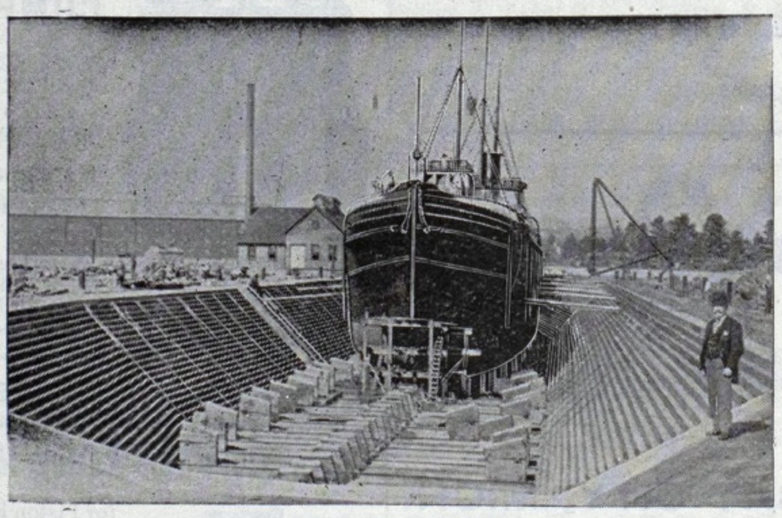

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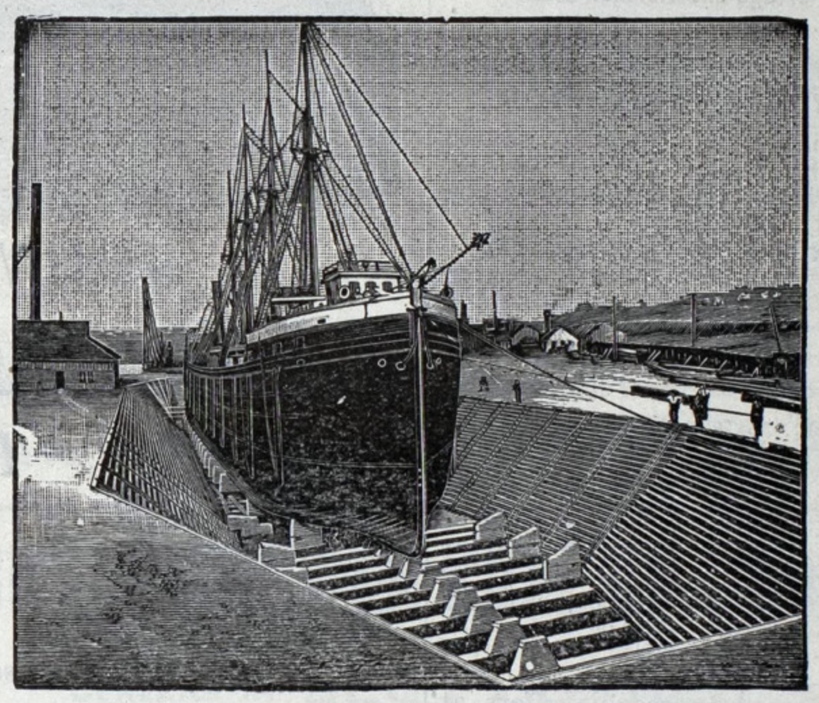

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